Air cooled chiller
AQVSL 85–160

82–157 kW HFC 410A Scroll

Technical feature

- 6 sizes.
- Cooling capacity from 82 to 157 kW.
- 3 Versions:
  STD (Standard version);
  HT (High Temperature version);
  HPF (High Pressure Fans version).
- 2 acoustic versions:
  Standard version (STD) and Extra Low Noise version (ELN).
- One refrigerant circuit, scroll compressors.
- Microchannel coils.
- Microprocessor control.

Accessories and options

- Hydrokit with 1 or 2 pumps with ot without buffer tank.
- Desuperheater.
- Coils treatments.
- Unit protection grilles.
- Sofstart.
- BMS interface.
- Overload protection for compressors.
- Automatic circuit breaker.
- Flow switch (standard).
- Mechanical gauges kit.
- Fan speed control.
- Electronic expansion valve.
- Pressure switch.
- Water filter.
- Power factor corrector capacitors (standard).
- Compressors acoustic box (standard).
- Sequence phases control (standard).
- Coils treatments.
- Compressors jackets.

Operating limit

AQVSL			85–95		115–160	
			Min	Max	Min	Max
Leaving water temperature	Water	°C	+5	+18	+5	+18
	Water with glycol + electonic expansion valve	°C	-6	+5	-6	+5
	Δ T Water	K	3	8	3	8
Air temperature	BLN	°C	+5	+48	+5	+45
	ELN	°C	-18	+45	-18	+42
	HT	°C	-18	+50	-18	+48
External static pressure	Standard fans	Pa	0			
	High pressure fans (HPF)	Pa	< 120			

Technical feature AQVSL 85–160 BLN

Model AQVSL BLN		85	95	115	125	140	160
Cooling capacity (1)	kW	82,3	94,9	105,8	121,0	134,3	157,2
Power input (2)	kW	24,4	28,4	34,9	39,9	46,5	52,7
GROSS EER		3,08	2,98	2,75	2,78	2,68	2,71
GROSS ESEER		4,31	4,17	3,85	3,9	3,75	3,79
EER		3,03	2,93	2,71	2,74	2,64	2,66
ESEER		4,03	3,99	3,51	3,69	3,47	3,56
GROSS EER HPF		2,76	2,61	2,63	2,68	2,59	2,59
GROSS ESEER HPF		3,87	3,65	3,68	3,75	3,63	3,63
Number of refrigerant circuits		1	1	1	1	1	1
Part load steps	%	0-50-100	0-43-100	0-50-100	0-44-100	0-50-100	0-50-100
Power supply	V/ph/Hz	400/3/50					
Startup type		Direct					
Refrigerant							
Type		HFC 410A					
Charge	kW	10	11	13	15	16	19
Compressor							
Qty		2	2	2	2	2	2
Type		Scroll					
Crankcase heater	W	70	120	120	150	150	150
Evaporator							
Qty		1	1	1	1	1	1
Type		Plate exchanger AISI 316					
Water flow	l/h	14.148	16.308	18.216	20.808	23.112	27.036
Antifreeze heater	W	130	130	130	130	130	130
Connection type		Victaulic					
Inlet/outlet diameter	inch	2½"	2½"	2½"	2½"	2½"	2½"
Water drain connection	inch	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"
Condenser							
Qty		2	2	2	2	2	2
Frontal surface	mm	2.600x970	2.600x970	2.600x970	2.600x970	2.600x970	2.600x970
Fans							
Qty		2	3	2	2	2	2
Air flow	m³/h	36.360	50.040	45.000	43.920	43.920	62.280
Speed	rpm/min	690	690	900	900	900	900
Power input	kW	2,3	3,5	3,6	3,6	3,6	5,4
Weight							
Shipping	kg	945	1.062	1.148	1.170	1.261	1.345
Operating	kg	965	1.083	1.172	1.194	1.288	1.373
Dimensions							
Length	mm	2.950	2.950	2.950	2.950	2.950	2.950
Width	mm	1.110	1.110	1.110	1.110	1.110	1.110
Height	mm	2.250	2.250	2.250	2.250	2.250	2.250
Acoustical data							
Sound power level (3)	dB(A)	84	85	88	88	88	90
Sound pressure level (4)	dB(A)	52	53	56	56	56	58

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature.
(2) Compressors only.
(3) Acoustic data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.
(4) The sound pressure is calculated from a distance of 10 m.
GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.
EER: efficiency in cooling unit according to EN14511-2011.

Technical feature AQVSL 85–160 ELN

Model AQVSL ELN		85	95	115	125	140	160
Cooling capacity (1)	kW	80,1	92,4	101,9	117,2	129,5	152,2
Power input (2)	kW	25,4	29,7	37,0	41,8	48,7	55,2
GROSS EER		2,99	2,90	2,59	2,66	2,54	2,6
GROSS ESEER		4,18	4,06	3,63	3,72	3,55	3,64
EER		2,94	2,85	2,56	2,62	2,50	2,55
ESEER		3,96	4,01	3,53	3,67	3,38	3,54
Number of refrigerant circuits		1	1	1	1	1	1
Part load steps	%	0-50-100	0-43-100	0-50-100	0-44-100	0-50-100	0-50-100
Power supply	V/ph/Hz	400/3/50					
Startup type		Direct					
Refrigerant							
Type		HFC 410A					
Charge	kW	10	11	12	14	16	18
Compressor							
Qty		2	2	2	2	2	2
Type		Scroll					
Crankcase heater	W	70	120	120	150	150	150
Evaporator							
Qty		1	1	1	1	1	1
Type		Plate exchanger AISI 316					
Water flow	l/h	13.752	15.876	17.532	20.160	22.284	26.172
Antifreeze heater	W	130	130	130	130	130	130
Connection type		Victaulic					
Inlet/outlet diameter	inch	2½"	2½"	2½"	2½"	2½"	2½"
Condenser							
Qty		2	2	2	2	2	2
Frontal surface	mm	2.600x970	2.600x970	2.600x970	2.600x970	2.600x970	2.600x970
Fans							
Qty		2	3	2	2	2	3
Air flow	m^3/h	29.880	40.320	36.360	36.720	36.720	51.120
Speed	rpm/min	550	550	690	690	690	690
Power input	kW	1,4	2,1	2,3	2,3	2,3	3,5
Weight							
Shipping	kg	962	1.080	1.166	1.188	1.278	1.365
Operating	kg	983	1.100	1.189	1.211	1.306	1.393
Dimensions							
Length	mm	2.950	2.950	2.950	2.950	2.950	2.950
Width	mm	1.110	1.110	1.110	1.110	1.110	1.110
Height	mm	2.250	2.250	2.250	2.250	2.250	2.250
Acoustical data							
Sound power level (3)	dB(A)	82	83	84	85	85	87
Sound pressure level (4)	dB(A)	50	51	52	53	53	55

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature
(2) Compressors only.
(3) Acoustic data are at full load.Sound power values in accordance with ISO 3744 and Eurovent 8/1.
(4) The sound pressure is calculated from a distance of 10 m.
GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.
EER: efficiency in cooling unit according to EN14511-2011.

Technical feature AQVSL 85–160 HT

Model AQVSL HT		85	95	115	125	140	160
Cooling capacity (1)	kW	86,1	98,9	108,6	123,6	138	160,8
Power input (2)	kW	22,8	26,3	33,4	38,5	44,8	50,9
GROSS EER		3,06	2,88	2,8	2,82	2,75	2,73
GROSS ESEER		4,29	4,04	3,92	3,95	3,86	3,82
Number of refrigerant circuits		1	1	1	1	1	1
Part load steps	%	0-50-100	0-43-100	0-50-100	0-44-100	0-50-100	0-50-100
Power supply	V/ph/Hz	400/3/50					
Startup type		Direct					
Refrigerant							
Type		HFC 410A					
Charge	kW	10	12	13	15	17	19
Compressor							
Qty		2	2	2	2	2	2
Type		Scroll					
Crankcase heater	W	70	120	120	150	150	150
Evaporator							
Qty		1	1	1	1	1	1
Type		Plate exchanger AISI 316					
Water flow	l/h	14.832	17.028	18.684	21.276	23.724	27.648
Antifreeze heater	W	130	130	130	130	130	130
Connection type		Victaulic					
Inlet/outlet diameter	inch	2½"	2½"	2½"	2½"	2½"	2½"
Condenser							
Qty		2	2	2	2	2	2
Frontal surface	mm	2.600x970	2.600x970	2.600x970	2.600x970	2.600x970	2.600x970
Fan							
Qty		2	3	2	2	2	3
Air flow	m^3/h	54.000	75.960	53.280	50.760	50.760	72.720
Speed	rpm/min	1.100	1.100	1.100	1.100	1.100	1.100
Power input	kW	5,3	8	5,3	5,3	5,3	8
Weight							
Shipping	kg	965	1.092	1.168	1.190	1.281	1.375
Operating	kg	985	1.113	1.192	1.214	1.308	1.403
Dimensions							
Length	mm	2.950	2.950	2.950	2.950	2.950	2.950
Width	mm	1.110	1.110	1.110	1.110	1.110	1.110
Height	mm	2.250	2.250	2.250	2.250	2.250	2.250
Acoustical data							
Sound power level (3)	dB(A)	95	97	95	95	95	97
Sound pressure level (4)	dB(A)	63	65	63	63	63	65

(1) Data based on 7°C leaving chilled water temperature and 35°C ambient air temperature.
(2) Compressors only.
(3) Acoustic data are at full load. Sound power values in accordance with ISO 3744 and Eurovent 8/1.
(4) The sound pressure is calculated from a distance of 10 m.
GROSS EER: efficiency in cooling mode without considering the available head of the pump or the pressure drop of the heat exchanger.